

WHAT IS CLAIMED IS:

1. An electrical device comprising:
a housing formed of heat conductive material;
an electrical apparatus positioned within said housing; and
5 a flexible printed circuit board attached to at least a portion of the exterior of said housing, said board having a circuit printed thereon, and further having at least one heat-generating electrical component mounted on the outside surface thereof,

whereby heat generated upon operation of said electrical component is transferred to said housing and dissipated therefrom into the surroundings.

10 2. An electrical device in accordance with claim 1 in which said housing has a plurality of exterior surfaces and in which said flexible circuit board is adhered to at least some of said plurality of exterior surfaces.

15 3. An electrical device in accordance with claim 1 in which said electrical apparatus is an electro-mechanical device.

20 4. An electrical device in accordance with claim 3 in which said printed circuit and said at least one electrical component comprise a control system for said electro-mechanical device.

5. An electrical device in accordance with claim 3 in which said electro-mechanical device is a circuit breaker.

25 6. An electrical device in accordance with claim 3 in which said electro-mechanical device is a motor.

7. An electrical device in accordance with claim 3 in which said electro-mechanical device is a relay.

30 8. An electrical device in accordance with claim 3 in which said electro-mechanical device is a rheostat.

9. An electrical device in accordance with claim 3 in which said electro-mechanical device is a solenoid.

10. An electrical device in accordance with claim 3 in which said electro-mechanical device is an actuator.

11. An electrical device in accordance with claim 3 in which said electro-mechanical device is a position sensor.

12. An electrical device in accordance with claim 3 in which said printed circuit and said at least one electrical component comprises a system for receiving and processing signals from said electro-mechanical device.

13. An electrical device in accordance with claim 12, in which said partial circuit and said at least one electrical component further comprise a system for sending a control signal to said electro-mechanical device in response to a signal received from said electro-mechanical device.

14. An electrical device in accordance with claim 12, in which said printed circuit and said at least one electrical component further comprise means for transmitting processed signals to a location outside said electrical device.

15. A method for constructing an electrical device comprising:
providing a housing formed of heat conductive material;
providing an electrical apparatus within said housing; and
attaching a flexible printed circuit board to at least a portion of the surface of said housing, said board having a circuit printed thereon, and further having at least one heat-generating electrical component mounted on the outside surface thereof,
whereby heat generated upon operation of said electrical component is transferred to said housing and dissipated therefrom into the surroundings.

16. A method in accordance with claim 15 in which said housing has a plurality of exterior surfaces and further comprising adhering said flexible circuit board to at least some of said plurality of exterior surfaces.

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